

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Previously presented): An electronic authentication method comprising:
2 generating an identifier that is associated with contents in a first information
3 processing apparatus;
4 combining said contents and said identifier to produce enhanced content;
5 transmitting said enhanced content to a second information processing apparatus;
6 presenting said enhanced content to a user at said second information processing
7 apparatus, said identifier being combined with said contents in a manner that it is visually
8 imperceptible to said user;
9 receiving user data in said second information processing apparatus and in
10 response thereto producing input data from said user data, including obtaining said identifier
11 from said enhanced contents, wherein said input data is produced based on said identifier; and
12 transmitting said input data from said second information apparatus to said first
13 information apparatus as received input data.
- 1 2. (Previously presented): An electronic authentication method according to
2 claim 1, further comprising:
3 generating a second identifier at said first information processing apparatus;
4 storing said second identifier in a storage unit as a stored identifier;
5 incorporating said second identifier into said input data; and
6 in said first information processing apparatus, authenticating legitimacy of said
7 input data and invalidating said stored identifier if said second identifier in said input data
8 matches said stored identifier.

1 3. (Previously presented): An electronic authentication method according to
2 claim 1, wherein said identifier is an encryption key, wherein
3 said step of combining includes embedding said encryption key in said contents in
4 said first information processing apparatus prior to transmission of said contents to said second
5 information processing apparatus;
6 said step of producing includes encrypting said user data in said second
7 processing apparatus by using said encryption key prior to transmission of said input data to said
8 first information processing apparatus; and
9 said method further comprising decrypting said received input data in said first
10 information processing apparatus.

1 4. (Previously presented): An electronic authentication method according to
2 claim 3, wherein: said embedded encryption key is a public key; said received input data is
3 decrypted using a private key associated with said public key; and said public key and said
4 private key are generated in said first information processing apparatus.

1 5. (Previously presented): An information processing method comprising:
2 generating an identifier for contents;
3 storing said identifier as a stored identifier;
4 generating a second identifier;
5 incorporating said identifier and said second identifier with said contents to
6 produce enhanced contents such that when said enhanced contents is displayed to a user, said
7 identifier and said second identifier are visually imperceptible;
8 transmitting said enhanced contents to an external apparatus;
9 receiving received data from said external apparatus;
10 acquiring an acquired identifier for said contents; and
11 carrying out processing based on said received data and invalidating said stored
12 identifier if said acquired identifier matches said stored identifier.

6. (Canceled)

7. (Previously presented): An information processing method according to claim 5, wherein said second identifier is an encryption key, said method further comprising:
receiving an identifier encrypted by using said encryption key and decrypting said received encrypted identifier.

8. (Previously presented): An electronic authentication system comprising a first information processing apparatus and a second information processing apparatus wherein:
said first information processing apparatus comprises:
a means for generating an identifier for contents;
a storage means for storing at least a first portion of said identifier as a stored identifier; and
a means for transmitting enhanced contents and said identifier to said second information processing apparatus, including embedding means for embedding said identifier in said contents to produce said enhanced contents;
said second information processing apparatus comprises:
a means for inputting user data, including means for displaying received enhanced contents such that said identifier is not visually perceivable by a user; and
a means for transmitting said user data and said identifier to said first information processing apparatus as input data, wherein said input data is generated by processing said user data and said first portion of said identifier based on a second portion of said identifier; and
there is further provided a processing means for authenticating legitimacy of said input data received by said first information processing apparatus and invalidating said stored identifier if said first portion of said identifier contained in said input data matches said stored identifier.

1 9. (Previously presented): An electronic authentication system according to
2 claim 8, wherein said second information processing apparatus further comprises an acquirement
3 means for acquiring said identifier from said received enhanced contents.

1 10. (Previously presented): An electronic authentication system according to
2 claim 8, wherein said second portion of said identifier is an encryption key; and said first
3 information processing apparatus further comprises a reception means for receiving an identifier
4 encrypted by using said encryption key and decrypting said encrypted identifier.

1 11. (Previously presented): An information processing apparatus comprising:
2 a generation means for generating an identifier for contents, said identifier
3 comprising a first part and a second part;
4 a storage means for storing at least said first part of said identifier as a stored
5 identifier;
6 a transmission means for transmitting said contents and said identifier to an
7 external apparatus as enhanced contents, wherein said enhanced contents comprises said
8 identifier embedded in said contents such that upon displaying said enhanced contents to a user,
9 said identifier is substantially visually imperceptible;
10 a reception means for receiving received data from said external apparatus;
11 an acquirement means for acquiring an acquired identifier from said received
12 data; and
13 a processing means for carrying out processing based on said received data and
14 invalidating said stored identifier if said acquired identifier matches said stored identifier.

12. (Canceled)

1 13. (Previously presented): An information processing apparatus according to
2 claim 11, wherein second portion of said identifier is an encryption key; and there is further
3 provided a reception means for receiving an identifier encrypted by using said encryption key
4 and decrypting said received encrypted identifier.

1 14. (Previously presented): An information processing apparatus comprising:
2 a contents requesting means for requesting an external information processing
3 apparatus to transmit contents;
4 a reception means for receiving said requested contents, an identifier being
5 embedded in said requested contents;
6 a display means for displaying said requested contents to a user, wherein said
7 identifier is substantially visually imperceptible;
8 an extraction means for extracting said identifier from said requested contents;
9 an input means for inputting user data from a user; and
10 a transmission means for transmitting, as secured data, said user data and a first
11 portion of said identifier to said external information processing apparatus, said secured data
12 being generated using a second portion of said identifier.

1 15. (Previously presented): An information processing apparatus according to
2 claim 14, wherein said second portion of said identifier is an encryption key, said apparatus
3 further comprising an encryption means for encrypting said user data by using said encryption
4 key.

1 16. (Previously presented): A storage medium for storing information
2 readable by a computer, said medium characterized in that said information includes:
3 a generation function for generating an identifier for contents;
4 a storage function for storing a first portion of said generated identifier;
5 a transmission function for transmitting said contents and said identifier to an
6 external apparatus as enhanced content, wherein said generated identifier is embedded in said

7 contents such that upon displaying said enhanced contents to a user, said generated identifier is
8 substantially visually imperceptible;
9 a reception function for receiving data from said external apparatus;
10 an acquirement function for acquiring an identifier for said contents from said
11 received data; and
12 a processing function for authenticating legitimacy of said received data and
13 invalidating said stored identifier if said acquired identifier matches said stored identifier.

17. (Canceled)

1 18. (Previously presented): A storage medium for storing information
2 readable by a computer according to claim 16, wherein said generated identifier includes a
3 second portion that is an encryption key; and said information further includes a function for
4 receiving said data encrypted by using said encryption key and decrypting said received
5 encrypted data.

1 19. (Previously presented): A storage medium for storing information
2 readable by a computer, said medium characterized in that said information includes:
3 a contents requesting function for requesting an external information processing
4 apparatus to transmit contents;
5 a reception function for receiving said requested contents, an identifier embedded
6 in said contents;
7 a display function for displaying said requested contents to a user, wherein said
8 identifier is substantially visually imperceptible;
9 an extraction function for extracting said identifier from said contents;
10 an input function for inputting user data from a user; and
11 a transmission function for transmitting, as input data, said user data and a first
12 portion of said identifier to said external information processing apparatus, said input data being
13 generated using a second portion of said identifier.

1 20. (Previously presented): A storage medium for storing information
2 readable by a computer according to claim 19, wherein said second portion of said identifier is
3 an encryption key, said medium characterized in that said information further includes a function
4 for encrypting said user data by using said encryption key.

1 21. (Previously presented): An electronic authentication method comprising:
2 generating an identifier for contents in a first information processing apparatus;
3 driving said first information processing apparatus to store a first portion of said
4 identifier and the present time as a storage time in a storage unit;
5 transmitting said contents and said identifier to a second information processing
6 apparatus as enhanced content, wherein said identifier is embedded in said contents;
7 presenting said enhanced content to a user at said second information processing
8 apparatus, said identifier being visually imperceptible to said user;
9 inputting user data from a user received by said second information processing
10 apparatus in said second information processing apparatus;
11 transmitting, as secured data, said user data and said first portion of said identifier
12 from said second information processing apparatus to said first information processing apparatus,
13 said secured data being generated based on a second portion of said identifier; and
14 invalidating said first portion of said identifier stored in said storage unit if said
15 identifier received by said first information processing apparatus is not stored in said storage unit
16 or a time of a predetermined length has lapsed since said storage time stored in said storage unit.

1 22. (Previously presented): An electronic authentication method, comprising:
2 generating an encryption key that is associated with contents in a first information
3 processing apparatus;
4 embedding said encryption key into said contents to produce enhanced content
5 such that when said enhanced content is displayed to a user said encryption key is substantially
6 imperceptible;
7 transmitting said enhanced content to a second information processing apparatus;
8 displaying said enhanced content in said second information processing
9 apparatus;
10 inputting user data from a user that has been received by said second information
11 processing apparatus in said second information processing apparatus;
12 encrypting said user data using said encryption key to produce secured input data,
13 including acquiring said encryption key from said enhanced content;
14 transmitting said secured input data from said second information processing
15 apparatus to said first information processing apparatus; and
16 validating said secured input data by decrypting said secured input data with a
17 decryption key.

23. (Canceled)

1 24. (Previously presented): An authentication method in a system in which a
2 first computer making a request for a service is connected to a second computer rendering
3 services via a network, requested contents being transmitted from the second computer to the
4 first computer, data being transmitted from the first computer to the second computer associated
5 with the contents, said method comprising:
6 generating at the second computer an access number for accessing the contents
7 and cataloging the access number in a storage unit;

8 embedding the access number in the contents to produce enhanced content so that
9 the access number is substantially visually imperceptible when the enhanced content is displayed
10 and transmitting the enhanced content to the first computer;
11 displaying the contents at the first computer;
12 generating secured data at the first computer by processing user-provided data
13 with the access number fetched from the enhanced content and transmitting the secured data to
14 the second computer; and
15 authenticating validity of the secured data by decrypting the secured data received
16 at the second computer with a decryption key.

1 25. (Previously presented): An authentication method according to claim 24,
2 wherein the encryption key is a public key and the decryption key is a private key.

26 - 28. (Canceled)

1 29. (Previously presented): A server apparatus comprising:
2 a processor;
3 a storage device;
4 a network interface; and a bus interconnecting said processor, said storage device
5 and said network interface;
6 wherein said processor generates an encryption key for contents; and wherein said
7 processor transmits enhanced content comprising said contents and said encryption key to an
8 external apparatus via said network interface such that when said enhanced content is displayed
9 said encryption key is substantially visually imperceptible; and wherein said processor receives
10 data from said external apparatus via said network interface, said data being encrypted with said
11 encryption key.

1 30. (Previously presented): A server apparatus according to claim 29, wherein
2 in said encryption key is a public key component of a public key and private key encryption
3 method.

31. (Canceled)

32. (Previously presented): A client apparatus comprising:

a processor;

an input device;

a network interface; and a bus interconnecting said processor, said input device

and said network interface;

wherein said processor requests an external information processing apparatus to

transmit contents via said network interface; and wherein said processor receives said contents

and an encryption key embedded in said contents, such that when said content is displayed to a

user, said encryption key is substantially visually unperceivable; and thereupon, said processor

extracts said encryption key from said contents; and wherein said processor receives user data

from said input device; and wherein said processor transmits said user data to said external

information processing apparatus via said network interface by encrypting said user data with

said encryption key.

33 - 34. (Canceled)